

System9000

The System9000 is composed of the following:

- VRS Micro
- Micro90c
- Micro90X



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Micro90c

Micro90x

Micro80x

Micro Reference Series



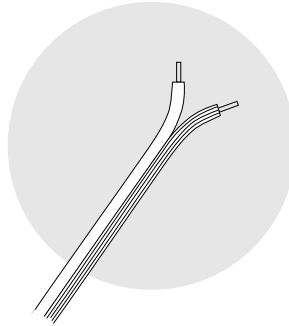
Boston
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How to Wire Your Speakers

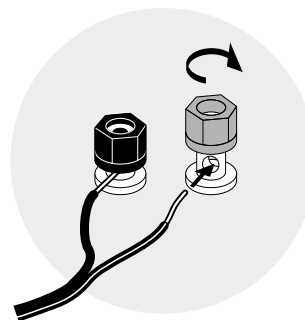
You need to wire your speakers correctly to obtain the best sound quality and the proper image. Wiring should just take a few minutes, but it's important to do it carefully, since incorrect wiring (such as reversed connections) can result in a poor soundstage or poor bass.

We recommend using 18-gauge or larger speaker wire for runs up to 25 feet (8m), and thicker 16-gauge or larger for longer runs. Strip ½" (12mm) of insulation off the ends of each speaker cable to expose the two conductors and tightly twist the wire strands. Maintain consistency of the + (red) and – (black) connections by using the markings on the wire.

IMPORTANT: Typically, one side of the wire is smooth. Connect this side to the – (black) connection. The other side has a rib or stripe. Connect this to the + (red) connection.



Using the five-way binding posts: The binding posts permit easy connection to banana plugs, pins, spade lugs, and bare wire. The metal surfaces are plated with 24K gold to prevent corrosion.



Insert the wire in the hole and tighten.

Connections

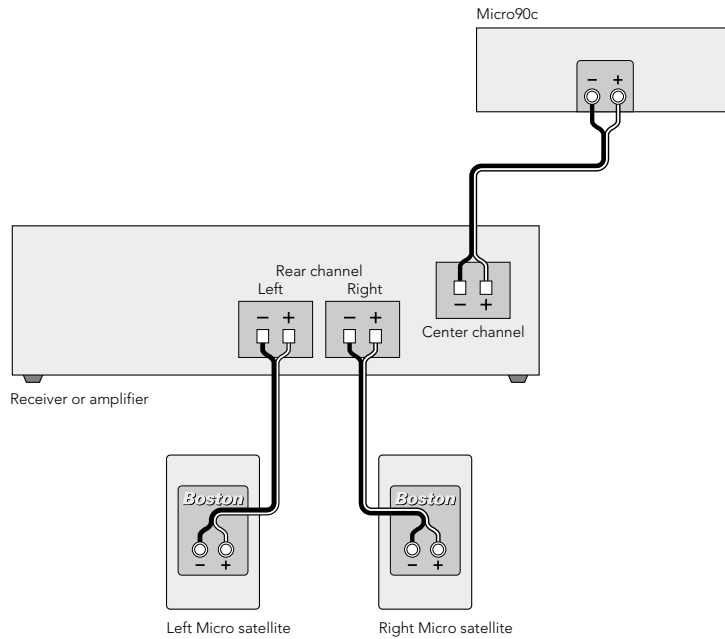
WARNING: To prevent electrical shock, always switch off the amplifier or receiver when making connections to the speaker.

Micro90c Center Channel Connections

Connect the speaker's terminals to the center channel terminals on the amplifier or receiver. Maintain consistency of the + (red) and - (black) connections by using the markings on the wire.

Micro90x and 80x Satellite Connections

Connect the satellites to the amplifier or receiver terminals designated for surround or rear channel effects. Usually, these will be labeled as "Left Rear" and "Right Rear." Maintain consistency of the + (red) and - (black) connections by using the markings on the wire.



IMPORTANT: Be sure to hook + to +, - to -.

Placement

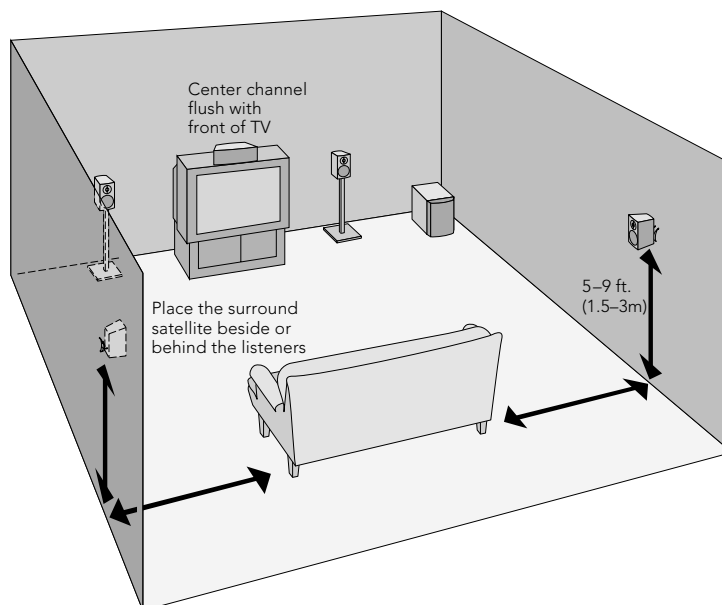
Micro90c Center Channel Placement

Place the Micro90c as close to the TV monitor as possible, with its front panel flush with the front of the television.

Self-adhesive rubber feet are included with the Micro90c to protect the TV's finish and prevent vibration.

Micro90x and 80x Satellite Placement

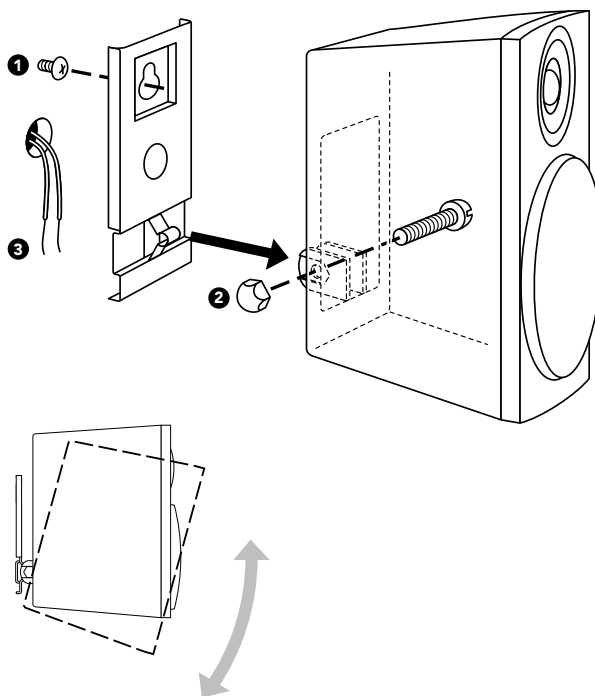
For the most realistic surround effects, place the surround speakers so the sound is diffused around the listening area. Avoid pointing them directly at the listeners.



Wall-Mounting the Micro Satellites

The Micro satellites may be wall-mounted using the included keyhole bracket.

- ❶ Install a #8 or #10 mounting screw on the wall (not supplied—consult a knowledgeable installer regarding the proper hardware to use on your wall).
- ❷ Attach the bracket to the back of the speaker with the machine screw and acorn nut as shown.
- ❸ If you are running wires behind the wall, make a $\frac{3}{8}$ " (9.5mm) wire hole, $1\frac{3}{4}$ " (44mm) below the mounting screw for the wire.



The speaker may be angled for optimum coverage of the listening area.

An optional pedestal shelf stand/wall-mount bracket (Model MRB) is available for the Micro80x that provides greater positioning flexibility. For more information, contact your dealer or Boston Acoustics directly.

Setting Up Your Home Theater System

Volume Levels: To obtain the best home theater effect, match the sound levels of each speaker. Home theater systems include a test signal that simplifies this level matching. Refer to the instructions provided with your surround sound electronics.

Center Channel Mode: Generally, with all surround systems, including Dolby® ProLogic® and Dolby® Digital, the center channel mode should be set to "NORMAL" or "SMALL." This setting diverts low bass to the front left and right channels, and will result in the greatest total system bass output. The "NORMAL" or "SMALL" center speaker setting ensures the subwoofer receives the most bass information under all conditions. The "Phantom" setting, which presumes you do not have a center channel speaker, should not be used.

Surround Channel Mode: If your electronics have a surround channel mode, it should also be set to "NORMAL" or "SMALL." This setting will divert any low bass in the surround channels to the subwoofer.

Specifications

	Micro90c	Micro90x	Micro80x
Frequency Response (± 3 dB)	100–20,000Hz	120–20,000Hz	120–20,000Hz
Recommended Amplifier Power	15–125 watts	15–125 watts	15–100 watts
Nominal Impedance	8 ohms	8 ohms	8 ohms
Sensitivity [1 watt (2.83v) at 1m]	90dB	89dB	89dB
Tweeter	1" (25mm) aluminum dome	1" (25mm) aluminum dome	$\frac{3}{4}$ " (19mm) dome
Bass Unit	(dual) $3\frac{1}{2}$ " (89mm) copolymer	$3\frac{1}{2}$ " (89mm) copolymer	$3\frac{1}{2}$ " (89mm) copolymer
Crossover Frequency	2500Hz	3800Hz	4500Hz
Dimensions (HxWxD)	$4\frac{3}{4} \times 12 \times 5\frac{1}{4}$ " (120 x 300 x 132mm)	$6\frac{7}{8} \times 4\frac{1}{4} \times 5\frac{3}{4}$ " (175 x 108 x 146mm)	$6\frac{7}{8} \times 4\frac{1}{4} \times 5\frac{3}{4}$ " (175 x 108 x 146mm)
Weight	11 lbs (5kg)	6 lbs ea. (3kg)	4 lbs ea. (2kg)
Finish	Black	Black or white	Black or white

Description

Micro90c Center Channel Speaker System

The Micro90c center channel speaker system delivers exceptionally articulate on-screen dialog and effects from a small, sleek package. Point-source driver spacing and a low crossover frequency assure wide, uniform horizontal dispersion for complete coverage of the listening area.

MagnaGuard® magnetic shielding ensures the speaker's magnetic field does not interfere with the television's picture.

Micro90x and 80x Satellites

Micro Reference satellites are ideally suited for use as surround speakers in a high-quality home theater system, or as extension speakers for another room in the house. The included wall-mount brackets make installation easy, and MagnaGuard® magnetic shielding allows placement next to a television or computer monitor.

Listening Levels and Power-Handling

The power recommendation for the system assumes that you will operate the amplifier in a way that will not produce distortion. Even our rugged speakers can be damaged by a modest amplifier if it produces distortion. If you hear a harsh, gritty noise, turn down the volume. Prolonged or repeated operation of your speaker with a distorted signal from the amplifier can cause damage that is not covered by the warranty.

Limited Warranty

For five years from the date of purchase, Boston Acoustics will repair for the original owner any defect in materials or workmanship that occurs in normal use of the Micro90c, Micro90x or Micro80x speakers, without charge for parts and labor.

Your responsibilities are to use the system according to the instructions supplied, to provide safe and secure transportation to an authorized Boston Acoustics service representative and to present proof of purchase in the form of your sales slip when requesting service.

Excluded from this warranty is damage that results from abuse, misuse, accidents, shipping or repairs or modifications by anyone other than an authorized Boston Acoustics service representative.

This warranty is void if the serial number has been removed or defaced.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

If Service Seems Necessary

First, contact the retailer from whom you purchased the speaker(s). If that is not possible, write to:

Boston Acoustics, Inc., 300 Jubilee Drive, Peabody, MA 01960.

We will promptly advise you of what action to take. If it is necessary to return your speaker to the factory, please ship it prepaid. After it has been repaired, we will return it freight prepaid in the U.S. and Canada.

Boston

Boston Acoustics

300 Jubilee Drive
Peabody, MA 01960 U.S.A.
508-538-5000

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VRS Micro

**Micro Reference Diffuse-Field
Surround Speaker System**



BostonAcoustics

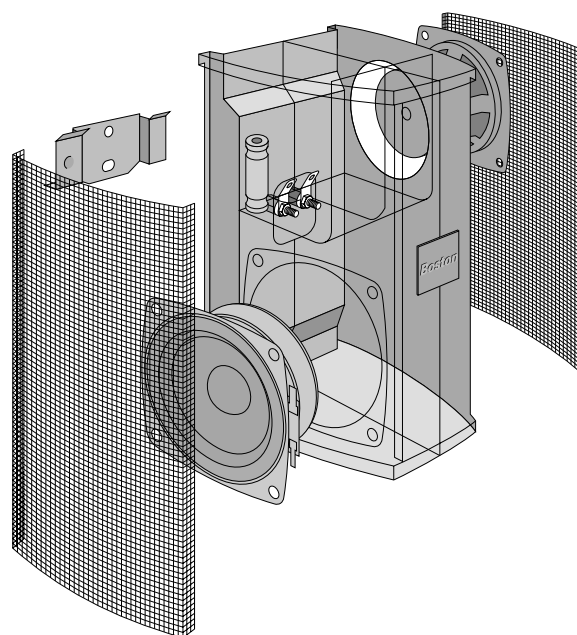
Specifications

Frequency Response ($\pm 3\text{dB}$)	120–20,000Hz
Recommended Amplifier Power	15–100 watts
Nominal Impedance	8 ohms
Sensitivity [1 watt (2.83v) at 1m]	86dB
Full-Range Driver	3½" (89mm) copolymer
High-Frequency Driver	2½" (65mm) polymer-treated paper
Crossover Frequency	350Hz
Dimensions (HxWxD)	7⅝ x 3⅞ x 5⅜" (194 x 98 x 137mm)
Weight/each	4 lbs (2kg)
Finish	Black or white

Description

The VRS Micro is a diffuse-field surround speaker that provides realistic rear channel surround effects with Dolby® ProLogic® and Dolby® Digital decoding electronics.

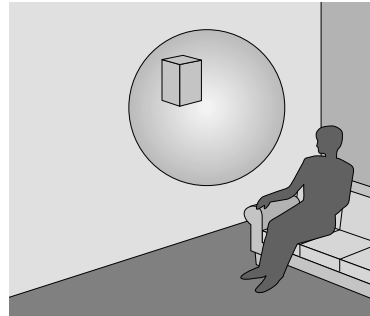
The VRS Micro cabinet is sculptured to aim sound along the walls, rather than directly at the listener, and to blend with the room's decor. Frequencies from 120 to 20,000Hz are handled by a specially designed 3½" (89mm) full-range driver, firing toward the front of the room. Frequencies above 350Hz are handled by a 2½" (65mm) high-frequency driver, firing backward. Gold-plated five-way binding posts allow the connection of virtually any speaker cable. Straightforward mounting of the speaker on any wall or ceiling can be easily accomplished with the included brackets.



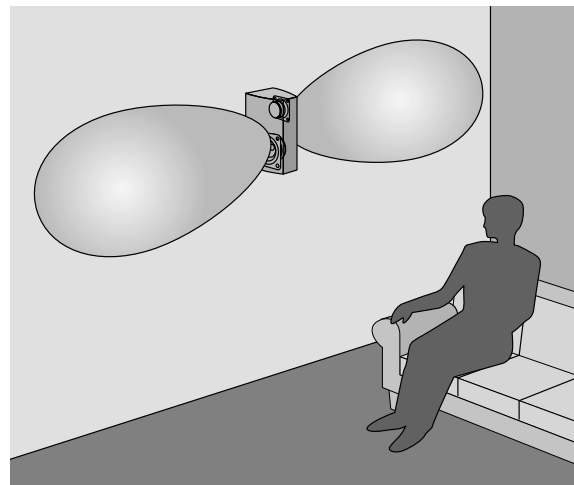
Diffuse Sound

In a movie theater, a diffuse surround sound field is created by using an array of surround speakers around the sides and rear of the theater. Since this is not practical in the home, a diffuse-field speaker achieves the same effect with a single pair of speakers.

When a conventional direct-radiating speaker is used for surround, sound is aimed directly at the listener. Because the listener can localize the sound, the surround effect is dramatically reduced (above right).



The VRS Micro contains two drivers, operating with opposite polarities—one speaker pushes out and the other pulls in. This directs most of the sound sideways (right). The VRS Micro generates a “figure 8” pattern above 350Hz along the walls of the room. The sound is then reflected from the end walls, ceiling and floor before returning to the listener as diffuse sound, which comes from all around the listener.



Connecting Your VRS Micro Speakers

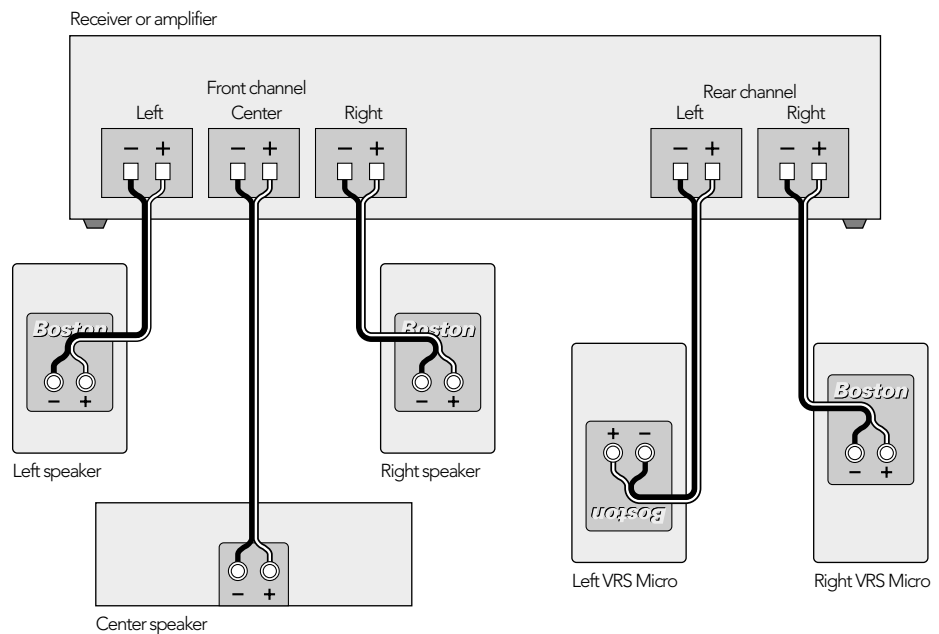
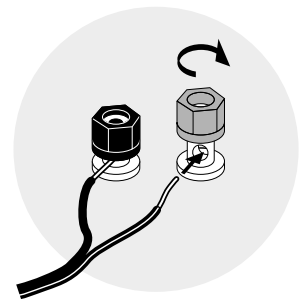
Connect the speaker's terminals to those on the amplifier or receiver designated for "surround" or "rear channel effects." Maintain consistency of the + (red) and – (black) connections by using the markings on the wire.

We recommend 18-gauge (or heavier) speaker wire for runs up to 25' (8m), and thicker 16-gauge speaker wire for longer runs. Strip ½" (12mm) of insulation from the ends of each wire to expose the conductors. Tightly twist the wire strands together. Maintain the consistency of the + (red) and – (black) connections.

IMPORTANT: Typically, one side of the hook-up wire is ribbed and the other is smooth. Connect the ribbed side to the + (red) terminals and the smooth side to the – (black) terminals.

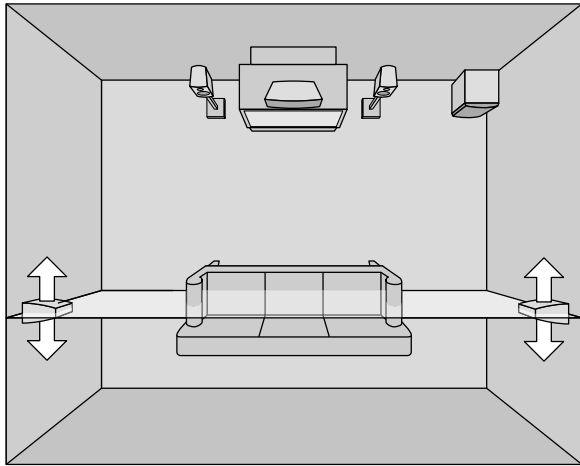
WARNING: To prevent electrical shock, always switch off the amplifier or receiver when making connections to the speaker.

Using the five-way binding posts: The binding posts permit easy connection to banana plugs, pins, spade lugs and bare wire. The metal surfaces are plated with 24K gold to resist corrosion.

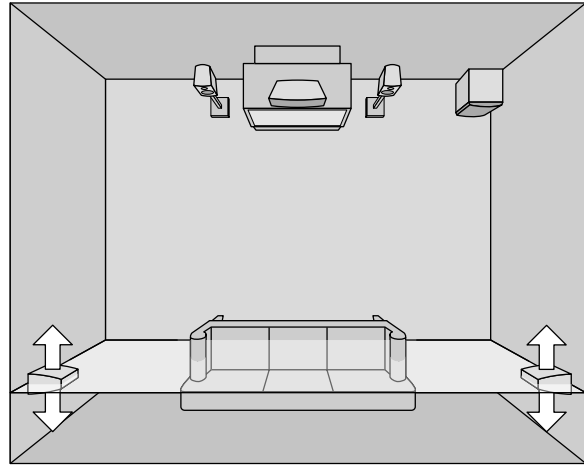


Room Placement

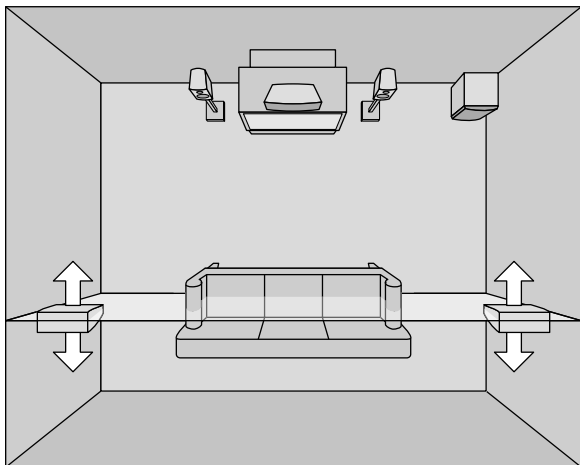
Room placement is one of the most important factors contributing to the quality of home theater sound. Take a few minutes to place your speakers correctly to ensure they will sound their best.



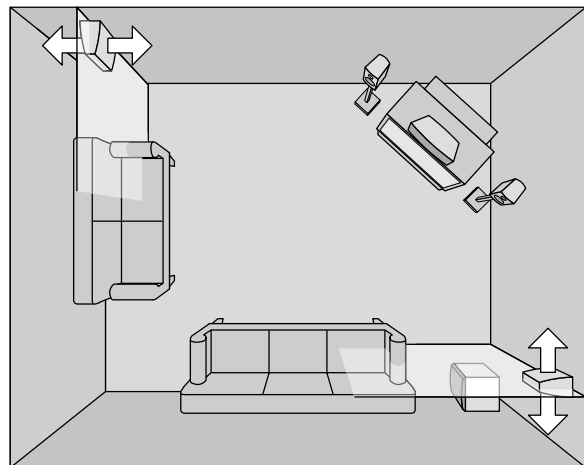
Place the VRS Micro speakers on either side of the listening area.



If the listening position is against the wall, place the speakers to either side, no less than 20" (50cm) from the rear wall.



One or both of the VRS Micro speakers may be hung from the ceiling. Make sure the arrow on the rear label points to the front of the room.



If the viewing area is in a corner, the speakers may be placed to either side on adjacent walls.

IMPORTANT: Your speakers have been packed as a LEFT and RIGHT matched set. Make sure that each speaker is mounted on the correct side, with the larger driver pointing to the front of the theater area. The arrow on the back of each speaker should point toward the front of the room.

Listening Levels and Power-Handling

IMPORTANT: Adjusting Listening Volume—To obtain the best home theater effect, balance the sound level of each speaker. Home theater systems contain a test signal that simplifies this procedure. Refer to the instructions provided with your surround sound electronics.

The power recommendation for the speaker assumes the amplifier is not overdriven, which, over a long period, can damage even our rugged speakers. If you hear a harsh, gritty noise, turn down the volume control. Prolonged or repeated operation with a distorted signal from the amplifier can cause damage to the speakers, which is not covered by the warranty.

Setting Up Your Home Theater System

Volume Levels: To obtain the best home theater effect, match the sound levels of each speaker. Home theater systems include a test signal that simplifies this level matching. Refer to the instructions provided with your surround sound electronics.

Surround Channel Mode: If your electronics have a surround channel mode, it should be set to "Normal" or "Small." This setting will divert any low bass in the surround channels to the subwoofer.

Wall- or Ceiling-Mounting Your VRS Micro Speakers

The VRS Micro is designed to be mounted directly onto a wall or ceiling. Attach the supplied bracket to the wall or ceiling and clip the speaker to the bracket.

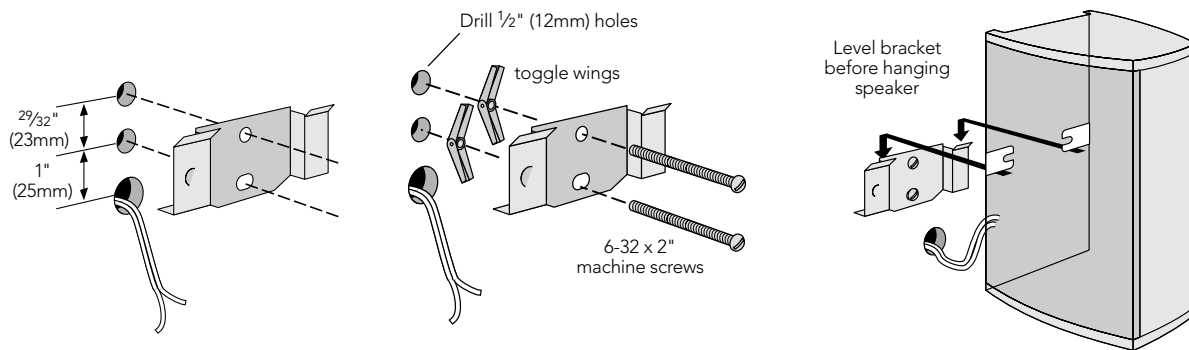
You may run wires to the speakers on the wall surface or behind the wall. Use the recessed area on the back of the speaker to accommodate the wire slack.

Mounting on drywall, paneling or other hollow surfaces: Use the 6-32 x 2" machine screws and toggle wings provided. The toggle wings require a 1/2" (12mm) hole.

Mounting on wood and other solid surfaces: Use a #6 or #8 wood screw.

Mounting on masonry, adobe and similar surfaces: Consult a knowledgeable installer about proper hardware. You will obtain best results with #6 or #8 screws.

IMPORTANT: Your speakers have been packed as a LEFT and RIGHT matched set. Make sure that each speaker is mounted on the correct side, with the larger driver pointing toward the front of the theater area. The arrow on the back of each speaker should point toward the front.



Mounting

1. Make two holes using the bracket as a template. If running wires behind the wall, make a hole for them 1" (25mm) below the bracket (left).
2. Insert the machine screws through the bracket and thread onto the toggle wings before penetrating the wall (center).
3. Level the bracket and tighten the screws. Connect the wires and hang the speaker on the bracket, so the arrow on the label points to the front of the home theater area (right).

Painting Your VRS Micro Speakers

You may paint the surface and grilles of your VRS Micro speakers. You will need:

- A small screwdriver or knife to remove the grilles from the cabinet
- A fast-drying primer, such as Krylon® Sandable Spray Primer #1318
- Masking tape and scrap paper, and a clean dry cloth.

To paint the cabinet:

IMPORTANT: Do not paint the red and black electrical terminals or the black area behind the grilles.

1. Remove the grilles: Use a small screwdriver or knife to snap open the back edge of each grille near the terminals.
2. Mask off the baffles with masking tape and scrap paper, and wipe any dust from the cabinet.
3. Apply two thin coats of primer and let dry thoroughly.
4. Apply finishing paint and let dry.
5. Remove masking tape and paper.

To paint the grilles:

IMPORTANT: Avoid painting the grilles in a way that causes the holes to be filled.

1. Remove the grilles: Use a small screwdriver or knife to snap open the back edge of each grille near the terminals.
2. Paint the grilles: Primer is not required. If using a spray paint, use two thin coats. If using a house paint, thin the paint to avoid filling the perforation holes in the grille. Let the paint dry completely.
3. Reinsert the grilles: Insert the front edge in the groove near the logo and then snap the rear of the grille into place on the cabinet.

Limited Warranty

For five years from the date of purchase, Boston Acoustics will repair for the original owner any defect in materials or workmanship that occurs in normal use of the VRS Micro speaker system, without charge for parts and labor.

Your responsibilities are to use the system according to the instructions supplied, to provide safe and secure transportation to an authorized Boston Acoustics service representative and to present proof of purchase in the form of your sales slip when requesting service.

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